AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims

Claims 1-32 (cancelled)

Claim 33 (new): A process for alleviating the symptoms of a pulmonary disorder in a mammal, comprising administering early in the onset of the disorder an effective amount of a factor selected from a group consisting of an apoptosis inhibitor and a survival factor to the pulmonary system of a mammal to alleviate a pulmonary disorder or symptoms thereof.

Claim 34 (new): The process according to claim 33, wherein said factor is administered by systemic gene therapy.

Claim 35 (new): The process according to claim 33, wherein said factor is administered by cell based gene therapy.

Claim 36 (new): The process according to claim 33, wherein said factor is administered with a pharmaceutically acceptable excipient.

Claim 37 (new): The process according to claim 33, wherein said pulmonary disorder is pulmonary hypertension.

Claim 38 (new): The process according to claim 33, wherein said factor is delivered using viable, transfected mammalian cells, said transfected mammalian cells containing at least one expressible trans-gene coding for an apoptosis inhibitor.

Claim 39 (new): The process according to claim 38, wherein the mammalian cells are selected from the group consisting of dermal fibroblasts, smooth muscle cells, progenitor cells, endothelial progenitor cells, epithelial progenitor cells, smooth muscle progenitor cells, stem cells, and endothelial cells.

Claim 40 (new): The process according to claim 33, wherein said apoptosis inhibitor is selected from the group consisting of Z-Asp, Z-VAD, VEGF, Bcl-2, Bcl-xL, acetyl-DEVD-aldehyde inhibitor, acetyl-YVAD-aldehyde, acetyl-YVAD-chloromethylketone, Boc-D-(benzyl) chloromethylketone, crmA, Zn^{2+}, aurintricarboxylic acid, cytochalasin B, NO, eNOS, nNOS, iNOS, NO-donor compounds, ANG1, Akt, AlP, and BMP (bone morphogenetic protein).

Claim 41 (new): The process according to claim 40, wherein the apoptosis inhibitor is Z-Asp.

Claim 42 (new): The process according to claim 40, wherein the apoptosis inhibitor is Z-VAD.

Claim 43 (new): The process according to claim 40, wherein the factor is VEGF.

Claim 44 (new): The process according to claim 40, wherein the apoptosis inhibitor is ANG1.

Claim 45 (new): The process according to claim 35, wherein the factor is selected from the group consisting of VEGF, eNOS, iNOS, nNOS, NO-donor compounds, NO, and ANG1.

Claim 46 (new): The process according to claim 33, wherein said mammal is human.

Claim 47 (new): A process for preventing symptoms of a pulmonary disorder in a mammal, comprising administering a factor selected from the group consisting of an apoptosis inhibitor and a survival factor to the pulmonary system of a mammal to prevent a pulmonary disorder or symptoms thereof.

Claim 48 (new): The process according to claim 47, wherein said factor is administered by systemic gene therapy.

Claim 49 (new): The process according to claim 47, wherein said factor is administered by cell based gene therapy.

Claim 50 (new): The process according to claim 47, wherein said pulmonary disorder is pulmonary hypertension.

Claim 51 (new): The process according to claim 47, wherein said factor is delivered using viable, transfected mammalian cells, said transfected mammalian cells containing at least one expressible trans-gene coding for an apoptosis inhibitor.

Claim 52 (new): The process according to claim 51, wherein the mammalian cells are selected from the group consisting of dermal fibroblasts, smooth muscle cells, progenitor cells, stem cells, and endothelial cells.

Claim 53 (new): The process according to claim 47, wherein the apoptosis inhibitor is selected from the group consisting of Z-Asp, Z-VAD, VEGF, Bcl-2, Bcl-xL, acetyl-DEVD-aldehyde inhibitor, acetyl-YVAD-aldehyde, acetyl-YVAD-chloromethylketone, Boc-D-(benzyl) chloromethylketone, crmA, Zn^{2+}, aurintricarboxylic acid, cytochalasin B, NO, eNOS, iNOS, nNOS, NO-donor compounds, ANG1, Akt, AlP, and BMP (bone morphogenetic protein).

Claim 54 (new): A pharmaceutical composition for alleviating the symptoms of a pulmonary disorder in a patient in need thereof, comprising a carrier and an apoptosis inhibitor.

Claim 55 (new): A process for early diagnosis of a pulmonary disorder in a mammal, comprising assessing apoptosis in the pulmonary system of a mammal, wherein apoptosis is indicative of early onset of said pulmonary disorder.

Claim 56 (new): The process according to claim 55, wherein said pulmonary disorder is pulmonary hypertension.

Claim 57 (new): The process according to claim 55, wherein said assessing is carried out by caspase immunoreactivity assessment.

Claim 58 (new): A kit for alleviating the symptoms of a pulmonary disorder in a mammal, comprising an effective amount of a factor selected from the group consisting of an apoptosis inhibitor and a survival factor of the pulmonary system of the mammal and instructions for the administration thereof.

Claim 59 (new): The kit according to claim 58, wherein said instructions describe administration by systemic gene therapy.

Claim 60 (new): The kit according to claim 58, wherein said instructions describe administration by cell based gene therapy.

Claim 61 (new): The kit according to claim 58, further comprising a pharmaceutically acceptable excipient.

Claim 62 (new): The kit according to claim 58, wherein said instructions describe administration using viable, transfected mammalian cells, said transfected mammalian cells containing at least one expressible trans-gene coding for an apoptosis inhibitor.

Claim 63 (new): The kit according to claim 62, wherein said mammalian cells are selected from the group consisting of dermal fibroblasts, smooth muscle cells, progenitor cells, endothelial progenitor cells, epithelial progenitor cells, smooth muscle progenitor cells, stem cells, and endothelial cells.

Claim 64 (new): The kit according to claim 58, wherein said apoptosis inhibitor is selected from the group consisting of Z-Asp, Z-VAD, VEGF, Bcl-2, Bcl-xL, acetyl-DEVD-aldehyde inhibitor, acetyl-YVAD-aldehyde, acetyl-YVAD-chloromethylketone, Boc-D-(benzyl) chloromethylketone, crmA, Zn^{2+}, aurintricarboxylic acid, cytochalasin B, NO, eNOS, nNOS, iNOS, NO-donor compounds, ANG1, Akt, AlP, and BMP (bone morphogenetic protein).